REMARKS

This is in response to the Office Action of August 29, 2006. A request for a two month extension of time and the required fee are enclosed.

By this Amendment, Applicants have limited the claims to a metal alloy product formed from carbon steel or austenitic stainless steel and having an average thickness of at least 250 microns (claim 1) or an average thickness greater than 180 microns (claim 7). Prior to the Amendment the claim also encompassed alloy products made from iron, nickel, cobalt or copper based alloys. The Examiner rejected the claims under Section 112 saying that the disclosure did not support such a broad range of alloys.

Example 1 discloses coatings on carbon steel and austenitic stainless steel using a composition of 4% aluminum, 0.5% silicon, 0.5% aluminum chloride and 95% aluminum oxide. The average thickness of the diffusion coating on the 1018 carbon steel and the 304 austenitic stainless steel was 300 microns. Table 1 reports tests on carbon steel. Alloys 1, 7 and 9 all contain 5% aluminum in the pack mix and silicon ranging from 1% to 5%. These examples teach one skilled in the art how to make a metal alloy product within the amended claims. Therefore, the Examiner's rejection under Section 112 has been overcome.

The Examiner rejected pending claims under Section 102 as anticipated by Bayer et al. WO 98/20182 rejecting the Applicants' arguments that the claims were supported by the priority application 08/745,199. Yet, the Examiner conceded that examples 1 and 2 are in the parent application. Since those examples support the claims as amended which are limited to carbon steel and austenitic stainless steel, there is support or the amended claims in the parent application. Accordingly, the rejection based on Bayer has been overcome.

The Examiner also rejected claims 1, 2 and 4 as anticipated by U.S. Patent No. 4,079,157 to Yagi et al. That reference discloses a method of plating ferritic or austenitic stainless steel in which the steel is dipped into a plating bath. The resultant product has a top layer of iron aluminum alloy, a base material and a diffusion layer between the top layer and the base metal. Figure 2 reports the combined thickness of the diffusion layer and the alloy layer on top of the diffusion layer. There is no disclosure in the reference as to what portion of that combined thickness is attributable to the diffusion layer. Column 8 of the reference cited by the Examiner says that the combined thickness of the Fe-Al alloy and the Al diffusion layers produced after 36 hours is much greater, at 550 microns. Nothing in the reference teaches what portion of that 550 microns is comprised of the diffusion layer. Applicant notes that there is a graph in Figure 6 which shows the aluminum and silicon content of the base material aluminum diffusion layer and iron aluminum alloy layer. However, the graph does not report the thichness of each layer and there is no teaching that the graph accurately reproduces the relative thicknesses of the three components. Consequently, it would be mere speculation to extrapolate from this graph what portion of the 550 microns in the combined layer discussed at column 8 is attributable to the diffusion layer. Absent such express teachings, the claims are not anticipated by Yagi reference. There is also no suggestion in the Yagi reference that one should make an aluminum diffusion coating of 180 or 250 microns as claimed by Applicant. Consequently, the claims as amended are patentable over this reference.

For the foregoing reasons, Applicants submit that the claims as amended are in condition for allowance. Reconsideration and allowance are respectfully requested.

Respectfully submitted,

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